

## P229 Consultation Responses

Consultation issued on 17 February 2010

We received responses from the following Parties

Company	No BSC Parties / Non-Parties Represented	Role of Parties/non-Parties represented
SAIC Ltd. (for and on behalf of ScottishPower)	7/0	Supplier / Generator / Trader / Consolidator / Exemptible Generator / Distributor
E.ON UK	6/0	Supplier / Generator / Trader / Consolidator / Exemptible Generator
RWE Supply & Trading GmbH	10/0	Supplier/Generator/ Trader / Consolidator / Exemptible Generator / Party Agent
Rio Tinto Alcan (RTA)	0/1	Aluminium Smelter <sup>1</sup>
Drax Power Limited	1/0	Generator
Centrica	10/0	Supplier / Generator / Trader
Scottish and Southern Energy	9/0	Supplier / Generator / Trader / Consolidator / Exemptible Generator
EDF Energy	13/0	Supplier/Generator/Trader/Consolidator/Exemptible Generator/Party Agent/Distributor
Statoil ASA	1/1	Statoil Gas Trading Ltd: Non-Physical Trader Statoil ASA: 50% of Scira Ltd, future Generator, 25% of Forewind (Dogger Bank)

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

P229  
Report Phase Consultation Responses

02 March 2010

Version 1.0

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## Question 1: Do you agree with the Panel's initial view that the Proposed Modification should be rejected?

### Summary

Yes	No	Neutral/Other
7	2	0

### Responses

Respondent	Response	Rationale
SAIC Ltd. (for and on behalf of ScottishPower)	Yes	<p>ScottishPower agree with the Panel's recommendation that a seasonal zonal transmission losses scheme as proposed in P229 <b>would not</b> better achieve the Applicable BSC Objectives, when compared with the current baseline and therefore <b>should not</b> be made.</p> <p>The societal benefits from the enhanced security of supply provided by the National Electricity Transmission System are enjoyed by the whole of GB and therefore the costs of achieving this objective, including the associated transmission losses, should be applied across the whole market.</p> <p>The overriding effect from P229 of transferring of values from one set of parties to the other creates windfall gains and losses would be detrimental to the Objective (c) - promoting competitions, as well as causing higher costs to the industry and end consumers. P229 also removes the consistent basis for trading at the NBP, increases complexity and costs in the trading market and jeopardising the already delicate liquidity in the market creating further barrier to entry for new and small suppliers.</p> <p>ScottishPower believe that P229 would create a far greater cross subsidy than the current situation. We also believe that the current arrangement is simpler and necessary to facilitate the market for trading at the NBP.</p>

Respondent	Response	Rationale
		<p>Furthermore, P229 only improves cost reflectivity in one way but detracts it in another where some parties are credited for losses and the averaging methodology used in P229 means that some parties are disadvantaged further through their particular nodal position.</p> <p>The proposed modification discriminates against certain parties while favouring others through the transfer of windfall values and therefore is detrimental to Objective (a).</p> <p>While one may argue that any losses reduction as suggested by the CBA results would better promote Objective (b) for the efficient, economic and co-ordinated operation of the national transmission system, we believe this is based on assumptions that the market is centrally despatched, perfectly efficient and ideal, and that all parties' costs/contracts are known and consistent. Also, It does not take into account of the potential increase in Balancing Services costs via the wholesale market or the balancing mechanism. This modification does not generate any long term locational signal. The short term signal for despatching remains uncertain in reality. Therefore any reduction in losses and potential efficiency gain are questionable. In fact, the Modification may have a detrimental effect on the availability of flexible plant for the SO to manage the transmission system at times of system stress.</p> <p>This modification will have significant implementation costs and a higher cost of administration compared to the baseline and is detrimental to efficiency Objective (d).</p> <p>Furthermore, ScottishPower do not believe the CBA results give definitive conclusion that P229 Proposed would give significant benefits in view of the effect of distributional impacts on parties, that justify a change. ScottishPower acknowledge that the CBA could only be done based on known information at the time and the Mod Group has to accept the deemed expertise of the CBA consultant. However, we find that the wide range ( -£17m to £277m (with SOx and NOx included) or £4m to £98m (excluding SOx and NOx)) of the CBA results makes it difficult to conclude but believe that any benefits are overstated, as in our view, they are based on assumptions that are not representative of the market reality. The exercise also showed the uncertainty of the industry and indicated that any decision on making changes which could have such significant impact to the industry as this modification has without taking into account of Government policy</p>

Respondent	Response	Rationale
		<p>and industry expectation would be premature and inappropriate. This is particularly the case on the issues with Round 3 wind development, and the ENSG 2020 vision of network development especially relating to offshore HVDC links between Scotland and England.</p> <p>The results of the Task 10 as performed by the Load Flow Modeller showed significant differences in TLFs if the expected wind and infrastructure development were realised as indicated by Round 1, 2 &amp; 3 and the ENSG report. ScottishPower are disappointed that the CBA consultant did not take the views of the Mod Group on this in their consideration of scenarios, particularly when Task 10 scenario was developed and discussed at length by the Mod Group and the LF Modeller. We believe such scenario would at the very least be part of the aggressive wind scenario even though one would have also assumed that the ‘aggressiveness’ of development should also include shortening of timescale for wind farms to be implemented against their existing plan.</p> <p>As with all BSC modifications and procedure to be followed, ScottishPower acknowledge that the Mod Group was under timescale constraint and could only carry out a certain amount of assessment based on the current conditions, we therefore suggest that if the Authority were to decide on the modification predominantly based on the benefits from the CBA results, it would need to consider a more realistic scenario</p>
E.ON UK	No	<p>P229 would better facilitate achievement of the Applicable BSC Objectives (a), (b) and (c) and we believe the Proposed Modification should be implemented. There are many valid arguments for this:</p> <ul style="list-style-type: none"> <li>(a) The Transmission Company would be able to discharge its obligations more efficiently without the market distortion of uniform charging for variable transmission losses.</li> <li>(a) The licensee’s discharge of its non-discriminatory obligation would be enhanced by removing the disproportionate impact of the current TLM calculation.</li> <li>(b) Over time adoption of a seasonal zonal transmission losses scheme will achieve more efficient</li> </ul>

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		<p>System operation. Removal of the cross subsidies inherent in the existing charges and replacement with more cost-reflective charging would lead to more efficient and economic short-term operational and investment decisions by both generation and demand. It would also give long-term locational signals for production and consumption, encouraging appropriate investments in new and existing assets that would lead to more efficient, economic and co-ordinated System operation. As the cost-benefit analysis demonstrated, under all scenarios the Proposed would achieve a significant reduction in variable transmission losses and associated emissions, leading to more efficient System operation and lowering costs to the industry and ultimately end user.</p> <p>(c) The current arrangements distort competition as they do not accurately focus costs on the Parties who make an above-average contribution to overall system losses, nor incentivise those whose actions reduce them. This cross-subsidisation distorts the market, and has long benefited some Parties while some are unfairly apportioned costs resulting from the actions of those others.</p> <p>The desirability of locational signals in allocation of transmission losses has long been recognised, from the Pool Executive Committee to Offer and in previous BSC modifications. Ofgem have also acknowledged the negative consequences of the current cross subsidies, in inefficient generation and investment and higher costs, in responses to previous transmission losses modification proposals.</p>
RWE Supply & Trading GmbH	No	<p>We continue to believe that the proposal will better facilitate the relevant BSC objectives, notably Objective A, B and C. We believe that the proposed modification will</p> <ul style="list-style-type: none"> <li>• remove market distortions and the discrimination that exist in the present arrangements (Objective A);</li> <li>• remove cross subsidies which the present uniform charging for transmission losses creates (Objective B); and</li> <li>• promote competition in the sale and purchase of electricity by, among other benefits, introducing a</li> </ul>

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		<p>cost reflective allocation of transmission losses according to the degree to which BMUs in an applicable zone give rise to losses (Objective C)</p> <p>We believe that the work undertaken by the Assessment Group demonstrates the relative benefits of the proposed seasonal zonal loss allocation scheme.</p>
Drax Power Limited	Yes	<p>Drax agrees with the majority of the Panel that the Proposed Modification would <b>not</b> better facilitate Applicable BSC Objectives (b), (c) and (d). The proposal:</p> <ul style="list-style-type: none"> <li>• creates a huge redistribution of volume that is disproportionate to the perceived benefits of the proposal;</li> <li>• would create a new cross-subsidy in the opposite direction to the defect currently perceived by the proposer: <ul style="list-style-type: none"> <li>○ it must be recognised that all users contribute to the total volume of transmission losses, regardless of location on the system;</li> <li>○ under the Proposed Modification, a proportion of users would be awarded extra volume for continuing to contribute to total transmission losses, which is not cost reflective;</li> </ul> </li> <li>• is highly complex, which is a disadvantage to both small and new participants (generators and suppliers), regardless of where they / their customers are located;</li> <li>• does not take into account the fact that existing users (particularly suppliers / demand users and independent generators) will not be able to react to the signals that this modification aims to put in place due to historic location decisions and the investments they have already made;</li> <li>• does not take into account that some plant are required to run in specific locations due to the non-power related services they provide (e.g. heat from CHP).</li> </ul>
Centrica	Yes	Centrica supports the initial views of the (majority of the) Panel. We believe that the arguments of our

Respondent	Response	Rationale
		<p>Assessment Consultation response still stand.* So as to not create duplication, Centrica refers back to the reasons detailed in our Assessment Consultation response but summarise the main points here.</p> <p>Centrica continues to believe that P229 would be detrimental to objectives (b) and (c) due to:</p> <ul style="list-style-type: none"> <li>• Reduced certainty and predictability of what the long term allocation of transmission losses will be for the life of a project. This increases risk and would therefore be detrimental to investment. The load flow model would be expensive and complex to duplicate.</li> <li>• The environmental benefits are proportionally small compared with the benefits of investment in renewable generation in general. The negative impact on investment mentioned above only has to discourage a very small amount of renewable generation for the dispatch benefits of P229 to be exhausted.</li> <li>• The wealth transfer is abrupt and disproportionate to the modelled dispatch benefits.</li> <li>• Existing generation plant and demand is at a disadvantage as it did not face the locational signal in its choice of site.</li> <li>• P229 would alter the economic life of existing plant which we believe that, on balance, is likely to be detrimental to security of supply given the high level of plant due for retirement which could be brought forward in the short to medium term.</li> <li>• Centrica has concern that the methodology used to calculate TLFs and allocate transmission losses does not provide an accurate representation. The benefits provided are based on the methodology being more cost reflective. However, the results show instances where the allocation accuracy would deteriorate. Inaccurate allocation would lead to inefficient dispatch and market entry/exit.</li> <li>• Socialisation on a zonal, as opposed to a GB wide basis does not remove the existing cross subsidy. It would create instances where the socialised burden would increase for some parties.</li> </ul> <p>* Excluding the embedded exemptible benefits argument which the Modification Group addressed at the final Modification Group meeting</p>

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Scottish and Southern Energy	Yes	<p><u>Consideration of the Draft Modification Report</u></p> <p>We note the Panel discussions, as set out on pages 26-32 of the Draft Modification Report, and agree with the Panel's initial view that the P229 Original Modification should be rejected as, in our view, it does not better achieve the Applicable BSC Objectives when compared with the baseline.</p> <p>In respect of the Panel's consideration of the Modification Group's Assessment Report we agree with the Panel member who noted the limitation of the modelling (of not considering the actions of market participants) when its based on an environment of a 'perfectly competitive' market and concur that, as a result, the CBA overestimated the benefits of P229, as the benefits are primarily due to improved despatch by participants.</p> <p>We too were intrigued that the effect of all the CBA sensitivity analysis scenarios was to lower the overall benefits of implementing P229. Like the Panel member we would expect that some alternative CBA modelling scenarios around the central case to increase the benefits and others to decrease them.</p> <p>With respect to offshore wind generation and the comments, in the Draft Modification Report, about "the lower level of information available at the time the CBA modelling was done and the continuing elements of uncertainty in this area" we note that, in our view, there was a reasonable (rather than low) level of information available at the time the CBA was undertaken on, in particular, Round 3 projects.</p> <p>Specifically, the December 2008 joint study undertaken by National Grid and Econnect for Crown Estates had a list of the 25GW of Round 3 projects with:-</p> <ul style="list-style-type: none"> <li>a) associated MW;</li> <li>b) connection points; and</li> <li>c) connecting technology (AC or DC).</li> </ul> <p>We understand that this was flagged up to the Modification Group as early as January 2009 (circa four months prior to the CBA modelling being undertaken). At around the same time we understand a fair, equitable and transparent methodology was put forward to the Modification Group to determine when these</p>



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		<p>new generators could be connected.</p> <p>As to the load profiles that might be assigned to the Round 3 offshore wind generation we merely note that the CBA modelling already includes generation load profiles for the Rounds 1 and 2 projects. We can see no credible reason as to why the Rounds 1 &amp; 2 generation load profile information could not be used for modelling Round 3 in the CBA.</p> <p>We understand that a Panel member noted “that the CBA included analysis of a scenario with more offshore wind generation to assess the sensitivity of the CBA results to this factor, which indicated the results were not disproportionately sensitive to the level of offshore wind generation.”</p> <p>We beg to disagree. The CBA modelled a 1.2GW increase in offshore wind generation (from 6GW to 7.2GW). This equated, according to the CBA, to a decline in the P229 CBA benefit of £9M (from £277M to £268M).</p> <p>As we pointed out in our Assessment Consultation response the quantity of additional offshore generation (from Rounds 1, 2 and 3) is of the order of 27GW (on top of the 6GW modelled in the CBA).</p> <p>Thus each 1.2GW of additional offshore wind generation causes the total P229 benefits, according to the CBA, to fall by £9m (or 3.2%) which, when tabulated, corresponds to:-</p>

Respondent	Response	Rationale		
		GW	£M	%
		1.2	9	3.2
		2.4	18	6.4
		3.6	27	9.6
		4.8	36	12.8
		6.0	45	16.0
		7.2	54	19.2
		8.4	63	22.4
		9.6	72	25.6
		10.8	81	28.8
		12.0	90	32.0
		13.2	99	35.2
		14.4	108	38.4
		15.6	117	41.6
		16.8	126	44.8
		18.0	135	48.0
		19.2	144	51.2
		20.4	153	54.4
		21.6	162	57.6
		22.8	171	60.8
		24.0	180	64.0
		25.2	189	67.2
		26.4	198	70.4
		27.6	207	73.6
		<p>Thus the addition of the 27GW of offshore wind (from Rounds 1, 2 and 3, that was not included in the CBA model) would reduce the CBA modelled benefit of P229 by over £200M or by over 70%.</p>		
		<p>We therefore agree with the view of most of the Modification Group that the amount of offshore wind generation in the CBA was significantly too low.</p>		
		<p>Given these view, with respect to offshore wind generation, together with our previous comments (such as those with respect to WACC) outlined in our Assessment Consultation response we have come to the</p>		

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		<p>conclusion that the P229 CBA was not fit for the purpose of assisting us with our assessment of P229.</p> <p>We agree with the Panel members comments that P229 would impact TNUoS charges by affecting energy volumes through the impact on despatch identified by the CBA and support the further consideration of this aspect of P229, in particular, by the Authority in due course.</p> <p>Finally, with respect to the Panel member’s comments regarding the nodal aspects of the modelling, such as the location etc., of a ‘slack node’ we are mindful that (as with the modelling for P75/82 and P198/200/203/204) that there was a reluctance to model the location of the ‘slack node’ in other locations (such as southern England or northern Scotland) rather than Coventry to gauge the effect this could have on the modelling results.</p> <p><u>Applicable Objectives</u></p> <p>With respect to the Panel’s comments regarding the Applicable Objectives we find ourselves in wholehearted agreement with many of these comments as they echo those we (and other BSC Parties) made at the Assessment Consultation phase in arguing P229 Original (and Alternative) does not better facilitate the Applicable BSC Objectives.</p> <p>We set out in detail in our Assessment Consultation response the components of our argument as to why P229 Original would not better achieve the Applicable BSC Objectives when compared with the baseline.</p> <p>For the sake of brevity we do not repeat these detailed arguments here, rather the reader should refer to them as they form part of the P229 documentation. Therefore, in brief, our arguments with respect to the Applicable Objectives are as follows:-</p> <p><b>(a) The efficient discharge by the licensee [i.e. the Transmission Company] of the obligations imposed upon it by this licence [i.e. the Transmission Licence].</b></p> <p>We believe that P229 Original would not better facilitate the achievement of Objective (a) when compared with the baseline.</p> <p>The reason for this is that P229 Original gives rise to windfall gains and losses between BSC Parties. As such</p>

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		<p>it demonstrably discriminates (without justification) and thus fails to achieve the efficient discharge by the licensee of the obligations imposed upon it by this licence.</p> <p><b>(b) The efficient, economic and co-ordinated operation of the national transmission system.</b></p> <p>We believe that P229 Original would not better facilitate the achievement of Objective (b) when compared with the baseline.</p> <p>The reasons for this include:-</p> <ol style="list-style-type: none"> <li>1. The combination of TNUoS and zonal losses is not cost-reflective (as set out in Q1 (i) in our Assessment Consultation response).</li> <li>2. Inherent inaccuracies in the TLF calculation mean it would not deliver costs reflecting BM Unit impact on losses in every Settlement Period; therefore would not result in more accurate and appropriate allocation;</li> <li>3. Would discourage investment in wind generation in the North and encourage investment in the South, with a negative overall effect on investment, and therefore a negative environmental impact.</li> </ol> <p><b>(c) Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity.</b></p> <p>We believe that P229 Original would not better facilitate the achievement of Objective (c) when compared with the baseline.</p> <p>The reasons for this include:-</p> <ol style="list-style-type: none"> <li>1. The combination of TNUoS and seasonal zonal losses is not cost-reflective (as set out in Q1 (i) in our Assessment Consultation response).</li> <li>2. The inability of existing plant to relocate in response to seasonal zonal signals (as set out in Q1 (ii) in our Assessment Consultation response).</li> <li>3. The economic impact of P229 Original is significant (as set out in Q1 (iii) in our Assessment Consultation</li> </ol>

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		<p>response).</p> <p>4. The Regulatory risk it gives rise to (as set out in Q1 (iv) in our Assessment Consultation response).</p> <p>5. The signal is flawed (as set out in Q1 (v) in our Assessment Consultation response).</p> <p>6. The DTI Decision on BETTA (as set out in Q1 (vi) in our Assessment Consultation response).</p> <p>7. The environmental impact (as set out in Q1 (vii) in our Assessment Consultation response).</p> <p>8. The inconsistency of locational signals (as set out in Q1 (viii) in our Assessment Consultation response).</p> <p>9. It causes distributional transfers between market participants based on type and location which are windfall gains and windfall losses, to the detriment of competition.</p> <p>10. The transfers are disproportionate to any benefit of P229 Original.</p> <p>11. It is not cost reflective of the contribution to variable losses because it allocates negative variable losses, whereas all participants on the system cause some volume of variable transmission losses to occur.</p> <p>12. It introduces a new cross-subsidy because some participants benefit from being credited with energy, while others would be penalised by being debited energy.</p> <p>13. It has a disproportionate impact on classes of participants who cannot respond to signals: demand, renewables, combined heat and power (CHP) plant and nuclear generators.</p> <p>14. There are inherent inaccuracies which mean it does not guarantee more accurate and appropriate allocation, so rather than removing the purported cross subsidy, it would create a new, less transparent, cross subsidy.</p> <p>15. The socialisation of losses within zones would give inappropriate market entry/exit signals.</p> <p>16. The negative impact on investment in renewables due to increased cost of investment in unfavourable zones.</p> <p>17. It discriminates between new and existing generators.</p>

Respondent	Response	Rationale
		<p><b>(d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.</b></p> <p>We believe that P229 Original would not better facilitate the achievement of Objective (d) when compared with the baseline.</p> <p>The reasons for this include:-</p> <ol style="list-style-type: none"> <li>1. There is no defect in the Code (as we set out under Q1 'Defect' in our Assessment Consultation response).</li> <li>2. The high cost of implementation, coupled with the increased cost of administering the balancing and settlement arrangements, compared with the baseline.</li> <li>3. Adds additional complexity.</li> </ol> <p>Therefore, in conclusion, we agree with both the Modification Group and the BSC Panel that P229 Original should be rejected.</p>
EDF Energy	Yes	<p>We do not think Proposed Modification P229 would better meet any of the BSC objectives.</p> <p><b>Key Points</b></p> <ul style="list-style-type: none"> <li>• <b>There is considerable uncertainty whether BSC Objective (b) would be better met because the theoretical energy cost savings estimated by the cost benefit analysis are relatively very small and might easily be cancelled or outweighed by participants other responses to the imposition of such a scheme.</b></li> <li>• <b>BSC Objective (c) would not be better met because the impact on competition would be to create short term winners and losers, with potential for large errors in allocation of losses volumes to individual locations.</b></li> <li>• <b>BSC Objective (d) would not be better met because the costs of implementing and</b></li> </ul>

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		<p style="text-align: center;"><b>administering the proposal are considerable.</b></p> <p><b>BSC Objective (b)</b></p> <p>We are unconvinced that BSC Objective (b), relating to efficient transmission system operation, here also taken to include efficient overall despatch of generation to meet demand, would be better met, for the following reasons.</p> <p>A national welfare benefit is theoretically possible if participants are given the correct signals reflecting their individual impact on the shared cost of losses, and they are reasonably able to respond to those signals so the theoretical benefit materialises.</p> <p>Proposed Modification P229 would allocate an energy volume to every BM Unit which would be uncertain, unavoidable, and beyond the control of its owner, being dependent on the behaviour of other BM Units and the properties of the transmission system, in each half-hour, each season, and in the longer term.</p> <p>The Cost Benefit Analysis (CBA) performed for P229 shows theoretical net benefits arising from an assumed simple response of marginal generators to the proposed volume adjusters.</p> <p>However, in the study reference case, the estimated energy cost savings average £7m/year from an £8.4bn/year total "production cost", just 0.08%, equivalent to 0.02 £/MWh reduction in average energy prices. The fraction of total generation costs is lower still, because production cost considered in the CBA is mainly fuel and emissions and does not include the capital cost of generation which investors would also expect to recover. Benefits vary from scenario to scenario, but in all cases the impact on net energy costs is relatively very small, and it is clear that other factors could cancel or outweigh the assumed benefits. For example:</p> <ul style="list-style-type: none"> <li>• TLF factors would increase the uncertainty in out-turn energy costs faced by generators. Because this uncertainty is essentially unmanageable, it would be passed through to purchasers in a risk premium on the market price of energy set by marginal generators. We assume any correspondence</li> </ul>

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		<p>between beneficial TLF factors and marginal cost generators is transitory and uncertain.</p> <ul style="list-style-type: none"> <li>• TLF factors would increase the uncertainty in out-turn energy costs faced by suppliers, both in the short term in individual half-hours, and in the long term where the factors would not be known. This uncertainty would be passed through to customers in a risk premium.</li> <li>• Both generators and suppliers would need resources to manage the uncertainty and additional complexity associated with a locational transmission losses scheme. We think some parties have underestimated the cost of these resources.</li> <li>• The effective future capacity of generation investments would become less certain. Over the lifetime of most generation and demand investments, a wide range of loss adjustments is possible. This would increase the investment return required by investors, and hence the price to customers.</li> <li>• A significant step change in the value of some assets would arise from introduction of Proposed Modification P229. Regulatory imposition of such a change would increase the perception of regulatory risk with potential consequences for future investment relative to other investment activities.</li> <li>• Approximations in the TLF methodology, for example averaging over zone and season, mean that individual locations could be allocated losses costs which give the wrong signal, and in some cases completely the opposite signal to that which would theoretically give benefits. The P229 Cost Benefit Analysis has allowed for this in estimating generation despatch costs, but we are not convinced the impact on market prices and hence the price actually paid by customers, has been fully considered. Great Britain has a single market price, ultimately dependent on national marginal generation costs, not locational market prices or a weighted locational market price as in the analysis.</li> <li>• Generators operate with complicated physical constraints on behaviour such as start-up, shutdown, load changing, part-loading, interaction between units, which mean that actual despatch may not match assumptions in theoretical despatch.</li> <li>• Generators may operate with commercial constraints such as take-or-pay fuel contracts which may</li> </ul>



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		<p>cause actual operation to differ from theoretical despatch.</p> <ul style="list-style-type: none"> <li>• There is no indication that the introduction of P229 would significantly affect locational siting decisions to the national benefit, since losses are a relatively minor factor in such decisions compared with transmission access costs (which are related to losses), planning, fuel source, social and other factors. The reduction in the net value of losses under P229, as estimated by Cost Benefit Analysis, is due to short term despatch effects and is relatively small and uncertain compared to the value of losses itself and relative to the potentially inaccurate redistribution of losses between BM Units in different zones (see other comments below).</li> <li>• It is possible that in some circumstances those benefiting from the proposal might retain the benefits rather than passing them on to customers in reduced prices. For example, existing marginal generators might have no incentive to pass on benefits, nor suppliers with customers on long term or default contracts.</li> <li>• Changes in gas transport costs associated with marginal despatch of gas generation could reduce any theoretical benefit of reduced North to South electricity transport. Gas transport costs were ignored in the CBA. For example, the theoretical marginal benefit for electricity transmission losses of moving gas-fired electricity generation south could be reduced, cancelled or negated by marginal increases in gas transport costs for moving gas from North to South. Gas Shrinkage appears to have similar magnitude to electricity losses, and to be correlated with flows at St.Fergus in the north of Scotland.</li> </ul> <p><b>BSC Objective (c)</b></p> <p>We do not think Proposed Modification P229 would better meet BSC Objective (c) relating to competition, for the following reasons.</p> <p>The proposal would create windfall winners and losers at implementation, who would be largely unable to mitigate or hedge the costs and risks created by the proposals.</p> <p>A benefit to competition is theoretically possible if participants are allocated costs ex-ante representing their</p>

Respondent	Response	Rationale
		<p>contribution to the cost of losses. However, on a shared system the costs theoretically attributable to a particular user at a particular location may be strongly dependent on the actions of other users, and could vary considerably, in either direction, over time. New users change the allocation for existing users, and in turn become existing users themselves. For example, a generator might initially connect at a location and sell long term energy on the basis of the prevailing loss allocation, only for another user to connect and significantly increase the loss factor. This uncertainty represents a risk, which carries a cost, which users would reasonably be expected to seek to manage perhaps via some form of risk premium. One method is simply to pool the costs as at present. Another would be to seek firm losses allocations over extended periods of time, with residual losses perhaps targeted by locational loss factors, or perhaps shared, by non-firm users. The existing arrangement provides a natural locational loss uncertainty risk sharing to all users for the lifetime of an installation. If Proposed Modification P229 were implemented at a point in time without any associated hedging mechanism, there would be no incentive to create or join such a scheme for those who stand to gain from the step change. For example, those users with limited life investments who stand to gain for a period of a few years from introduction of the proposed locational scheme (windfall winners).</p> <p>Currently, no locational signal for losses is given. If the simple theoretical argument for a locational loss allocation is accepted, the maximum error currently is the difference between zero and the theoretical locational allocation. In a scheme such as Proposed Modification P229 where the zonal seasonal average allocation can be quite different, even in the opposite direction to the theoretical allocation at a particular location within that zone, the potential error for individual locations is doubled. For example, a location with a theoretical loss factor of +0.02 and a current factor 0.00 could be considered to be losing a positive allocation of 0.02, while under Proposed Modification P229 it could be allocated a seasonal zonal factor of -0.02, and be considered to be losing 0.04, twice as much as at present. The results of the load flow analysis performed for P229 show there are many locations where the nodal TLFs are distributed widely around the average and where this could be an issue for individual locations (see results of PTI-Siemens Task 3, report figures 29-32). Although the averaged factors might theoretically on average give the welfare benefits suggested by the Cost Benefit Analysis (noting our doubts given above), they could introduce significant errors for individual locations, which would have a detrimental effect on competition.</p> <p>Overall, BSC objective (c) relating to competition would not be better met, and this consideration outweighs</p>

Respondent	Response	Rationale
		<p>any potential but uncertain benefit under BSC Objective (b) relating to efficient system operation.</p> <p><b>BSC Objective (d)</b></p> <p>We think it self-evident that BSC Objective (d) relating to efficient administration of the balancing and settlement arrangements would not be better met, due to the considerable implementation and ongoing operational administration cost of a zonal losses scheme.</p>
Statoil ASA	Yes	<p>Introducing a ZTL scheme would have a negative impact on investment in forms of energy, such as renewables, for which the choice of location must be determined by geographical/meteorological elements.</p> <p>P229 is totally focused on a grid perspective, according to which the decision to locate plants at a certain geographical location is made independently of factors other than economic assessment. However, policy-makers in the UK have long promoted a shift towards electricity generation from renewable sources, which are by definition dependent on the availability of certain natural resources, therefore facing geographical constraints that go beyond economic decisions. P229 pushes regulation in the opposite direction, and is therefore inconsistent with the overall public policy that is being pursued by UK authorities.</p>

## Question 2: Do you agree with the Panel's initial view that the Alternative Modification should be rejected?

### Summary

Yes	No	Neutral/Other
7	2	0

### Responses

Respondent	Response	Rationale
SAIC Ltd. (for and on behalf of ScottishPower)	Yes	While ScottishPower accept P229 Alternative significantly reduces the distributional impacts on parties (when compared with P229 Proposed), we believe as with P229 Proposed the effect of introducing a zonal losses scheme creates windfall gains and losses, which discriminates against certain parties and benefits others; generate no long term locational signal and gives uncertain signal which would give rise to uncertainty and distort competition, and therefore would not better facilitate the achievement of the applicable BSC Objectives when compared with the current baseline. However, ScottishPower believe that, in comparing with P229 Proposed and if a zonal scheme were to be imposed, P229 Alternative would be the more 'reasonable' option.
E.ON UK	No	The Alternative although a watered down version of the Proposed would be favourable to not introducing Zonal losses at all which sends the wrong signals for short-term operations and future investments. Being less efficient and more complex than the Proposed, the benefits gained under Objectives (b) and (c) would be limited in comparison with the Proposed and somewhat offset by this negative impact under (d). Nevertheless the more significant progress towards (b) and (c) would make implementing the Alternative better than leaving the current cross-subsidies in place.
RWE Supply & Trading GmbH	No	We believe that the alternative modification would better facilitate Objective C in relation to competition in that the allocation of losses is more cost reflective than under the current baseline and the proposal would partially remove the cross subsidy inherent in the current allocation of losses.
Drax Power Limited	Yes	<p>Whilst the Alternative Modification goes some way to alleviating the cross-subsidy and distributional effects created by the Proposed Modification, issues surrounding the complexity of the scheme, the inability of existing users (consumers and generators) to react to signals, the need for certain plant to be located in specific locations (regardless of signals), etc, still apply to the Alternative Modification.</p> <p>Drax agrees with the majority of the Panel that the Alternative Modification would <b>not</b> better facilitate Applicable BSC Objectives (b), (c) and (d).</p>

Respondent	Response	Rationale
Centrica	Yes	Centrica does not believe that the Alternative would better facilitate the applicable objectives (b) and (c) when compared to the existing baseline. Because the Alternative is a diluted version of the Proposed, this for the same reasons outlined in our response to Q1.
Scottish and Southern Energy	Yes	<p><u>Consideration of the Draft Modification Report</u></p> <p>We note the Panel discussions, as set out on pages 26-32 of the Draft Modification Report, and agree with the Panel’s initial view that the P229 Alternative Modification should be rejected as, in our view, it does not better achieve the Applicable BSC Objectives when compared with the baseline. We explain our thoughts in more detail under Q1 above.</p> <p><u>Applicable Objectives</u></p> <p>With respect to the Panel’s comments regarding the Applicable Objectives we find ourselves in wholehearted agreement with many of these comments as they echo those we (and other BSC Parties) made at the Assessment Consultation phase in arguing P229 Alternative (and Original) does not better facilitate the Applicable BSC Objectives.</p> <p>We set out in detail in our Assessment Consultation response the components of our argument as to why the P229 Alternative would not better achieve the Applicable BSC Objectives when compared with the baseline.</p> <p>For the sake of brevity we do not repeat these detailed arguments here, rather the reader should refer to them as they form part of the P229 documentation. Therefore, in brief, our arguments with respect to the Applicable Objectives are as follows:-</p> <p><u>Applicable Objectives</u></p> <p><b>(a) The efficient discharge by the licensee [i.e. the Transmission Company] of the obligations imposed upon it by this licence [i.e. the Transmission Licence].</b></p> <p>We believe that P229 Alternative is neutral in terms of better facilitating the achievement of Objective (a)</p>

Respondent	Response	Rationale
		<p>when compared with the baseline.</p> <p><b>(b) The efficient, economic and co-ordinated operation of the national transmission system.</b></p> <p>We believe that P229 Alternative would not better facilitate the achievement of Objective (b) when compared with the baseline.</p> <p>The reasons for this include:-</p> <ol style="list-style-type: none"> <li>1. The combination of TNUoS and seasonal zonal losses is not cost-reflective (as set out in Q1 (i) in our Assessment Consultation response).</li> <li>2. Inherent inaccuracies in the TLF calculation mean it would not deliver costs reflecting BM Unit impact on losses in every Settlement Period; therefore would not result in more accurate and appropriate allocation;</li> <li>3. Would discourage investment in wind generation in the North and encourage investment in the South, with a negative overall effect on investment, and therefore a negative environmental impact.</li> </ol> <p><b>(c) Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity.</b></p> <p>We believe that P229 Alternative would not better facilitate the achievement of Objective (c) when compared with the baseline.</p> <p>The reasons for this include:-</p> <ol style="list-style-type: none"> <li>1. The combination of TNUoS and seasonal zonal losses is not cost-reflective (as set out in Q1 (i) in our Assessment Consultation response).</li> <li>2. The inability of existing plant to relocate in response to seasonal zonal signals (as set out in Q1 (ii) in our Assessment Consultation response).</li> <li>3. The economic impact of P229 Alternative is significant (as set out in Q1 (iii) in our Assessment Consultation response).</li> </ol>

Respondent	Response	Rationale
		<p>4. The regulatory risk it gives rise to (as set out in Q1 (iv) in our Assessment Consultation response).</p> <p>5. The signal is flawed (as set out in Q1 (v) in our Assessment Consultation response).</p> <p>6. The DTI Decision on BETTA (as set out in Q1 (vi) in our Assessment Consultation response).</p> <p>7. The environmental impact (as set out in Q1 (vii) in our Assessment Consultation response).</p> <p>8. The inconsistency of locational signals (as set out in Q1 (viii) in our Assessment Consultation response).</p> <p>9. It has a disproportionate impact on classes of participants who cannot respond to signals: demand, renewables, combined heat and power (CHP) plant and nuclear generators.</p> <p>10. The socialisation of losses within zones would give inappropriate market entry/exit signals.</p> <p>11. The negative impact on investment in renewables due to increased cost of investment in unfavourable zones.</p> <p>12. It discriminates between new and existing generators.</p> <p><b>(d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.</b></p> <p>We believe that P229 Alternative would not better facilitate the achievement of Objective (d) when compared with the baseline.</p> <p>The reasons for this include:-</p> <p>1. There is no defect in the Code (as we set out under Q1 'Defect' in our Assessment Consultation response).</p> <p>2. The high cost of implementation, coupled with the increased cost of administering the balancing and settlement arrangements, compared with the baseline.</p> <p>3. Adds additional complexity.</p> <p>Therefore, in conclusion, we agree with both the Modification Group and the BSC Panel that P229</p>

Respondent	Response	Rationale
		Alternative should be rejected.
EDF Energy	Yes	<p>Seeking to limit transmission loss adjustments to be positive amounts only (i.e. a charge rather than a credit) is likely to be more widely understood by participants and customers. It reflects the fact that taken in isolation, any individual flow can only cause losses, and real losses cannot be negative.</p> <p>Compared with the current baseline, the Alternative Modification creates a differential exposure to losses between different zones proportional to the impact of flows in that zone to total variable losses, and assessment modelling indicates it has potential to theoretically reduce energy costs. It mitigates the exposure of individual locations and parties to potential misallocations in the Proposed Modification P229 arising from differences between seasonally zonally averaged TLFs based on historic flows and theoretical outturn nodal values, reduces uncertainties in future loss adjustments, and reduces the unpopular transfer of value between zones which would occur under the proposal.</p> <p>The reduction in uncertainty of outturn loss adjustments in the Alternative Proposal would reduce the impact of the factors described in response to question 1 which might prevent the theoretical net energy cost savings indicated by cost benefit analysis from materialising. However, we still consider there is great uncertainty whether benefits would actually be delivered, and therefore whether BSC Objective (b) would be better met.</p> <p>The reduction in uncertainty and in potential error in relation to individual locations in the Alternative Proposal reduces the detrimental impacts on BSC Objective (c) relating to competition, compared with the Proposed Modification.</p> <p>In particular, the large transfer of loss allocation between zones, far exceeding the value of any net energy savings, is much reduced. For example, the CBA suggests a transfer of £31m from generators in some zones to those in other zones in 2011 in the proposal reference case (Table 5-6) compared with £13m in the alternative (Table A1-4). Tables 5-7 and A1-5 suggest higher values in subsequent years.</p> <p>The potential error at particular locations is also reduced according to the scaling factor used. In the hypothetical example described in comments on question 1, a potential error of 0.04 in "true TLF" would</p>



Respondent	Response	Rationale
		<p>be reduced to less than 0.02, similar to the theoretical difference between “true TLF” and current baseline.</p> <p>However, we still consider the likely impact on competition to be negative.</p> <p>The impact on BSC objective (d) would be negative, as for the original proposal.</p> <p>Given these considerations, our net view is that the Alternative Modification would not better meet BSC objectives overall than the current baseline.</p>
Statoil ASA	Yes	P229 Alternative does not address the fundamental flaws of P229 Proposed, i.e. the negative impact on investment and the unfairness to less responsive forms of energy. Hence, it should be rejected.

Question 3: Do you agree with the Panel’s initial view that, while both are inferior to the baseline, P229 Alternative is superior to P229 Proposed?

### Summary

Yes	No	Neutral/Other
6	2	1

### Responses

Respondent	Response	Rationale
SAIC Ltd. (for and on behalf of	Yes	When compared with P229 Proposed, the Alternative significantly reduces the distributional impact on parties while maintaining the perceived short term despatching signal and is therefore better for

Respondent	Response	Rationale
ScottishPower)		competition – Objective (c). It is also more cost reflective as physically all parties cause losses and the best one could achieve is zero, not negative (a credit) as in the case with P229 Proposed.
E.ON UK	No	<p>The current arrangements are unsatisfactory for the market and for System efficiency. As environmental considerations become increasingly important, reduction of variable losses is also valuable from the environmental and cost perspective. Hence both P229 Proposed and Alternative are better than the baseline.</p> <p>The Proposed is superior to the Alternative in addressing all these points more strongly. The existing cross-subsidy should be addressed properly as per the Proposed, with costs fully targeted at those whose actions increase variable losses on the system more than others, and incentivisation for more efficient operations.</p>
RWE Supply & Trading GmbH	No	We do not accept that the proposed and alternative modifications are inferior to the current baseline. Of the two modification proposals we believe that the P229 Proposed is superior to the P229 Alternative.
Drax Power Limited	Yes	<p>Drax believes that the Alternative Modification:</p> <ul style="list-style-type: none"> <li>• is more cost reflective due to the fact that it recognises that all users contribute to transmission losses, regardless of location;</li> <li>• recovers a volume of energy from participants that is closer to the volume of losses caused on the system, i.e. it takes steps to avoid the huge redistribution of credited volume that the Proposed Modification would cause.</li> </ul> <p>On that basis, Drax agrees with the majority of the Panel that the Alternative Modification is superior to the Proposed Modification, although neither proposal would better facilitate Applicable BSC Objectives (b), (c) and (d) when compared to the baseline.</p>

Respondent	Response	Rationale
Centrica	Yes	Centrica believes that, as a diluted version of the proposed Modification, the Alternative Modification would have a lower magnitude negative impact on the areas identified in Q1 except for the model accuracy for which the arbitrary nature of the scaling factor would decrease this accuracy. However, on balance, the Alternative is preferred.
Scottish and Southern Energy	Yes	<p>We agree with the Panel's initial view that, while both the Original and Alternative are inferior to the baseline, P229 Alternative is superior to P229 Original.</p> <p>Whilst we do not support, in principle, a seasonal zonal losses scheme (in either the form proposed with P229 Original or the Alternative) we can see, when compared with the Original, that the Alternative would better achieve the Applicable Objectives.</p> <p>As we have noted in our answer to Q1 in our Assessment Consultation response (under 'Defect') P229 Original would see, for example, generators in the south of Britain receiving a windfall gain (in the form of their settlement account being credited with additional electricity as if they had generated that electricity when, in fact, they had not) for doing nothing.</p> <p>However, P229 Alternative removes this windfall gain to southern generation (and the associated loss to northern generation). Previous work in this area has shown that without the scaling (that P229 Alternative introduces) there is a danger that the total amount of funds reallocated (via the P229 Original) will bear little relationship to the actual outturn costs of variable transmission losses that occur from the despatching of generation by National Grid.</p> <p>This would introduce a competitive disadvantage into the market place and run counter to the achievement of the Applicable Objective (c) as well as, by virtue of introducing discrimination, running counter to Applicable Objective (a).</p> <p>It is also clear that any scheme that transfers funds from northern generation to southern generation in excess of the cost of variable transmission losses is, in itself, a cross subsidy.</p>

Respondent	Response	Rationale
		<p>Furthermore, a major anomaly arises with P229 Original in that it creates negative seasonal zonal loss factors. As it is physically impossible to create energy from nothing it is inappropriate to consider a proposal (P229 Original) which has negative seasonal zonal loss factors.</p> <p>With the P229 Alternative this anomaly recedes.</p> <p>Removing this anomaly and the associated windfall gain to southern generation (as the P229 Alternative does) better achieves, in particular, Applicable Objective (c); when compared to the Original; by promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity.</p> <p>Therefore, in conclusion, we agree with both the Modification Group and the BSC Panel that P229 Alternative is better than P229 Original, but not better than the baseline.</p>
EDF Energy	Yes	<p>As described in response to Assessment Consultation:</p> <p>The reduction in uncertainty of outturn loss adjustments in the Alternative Proposal would reduce the impact of the factors described in response to question 1 which might prevent the theoretical net energy cost savings indicated by cost benefit analysis from materialising, so making better achievement of BSC Objective (b) more likely than the Proposed Modification. However, we still consider there is great uncertainty whether benefits would actually be delivered.</p> <p>The reduction in uncertainty and in potential error in relation to individual locations in the Alternative Proposal reduces the detrimental impacts on BSC Objective (c) relating to competition, compared with the Proposed Modification. In particular the large transfer of loss allocation between participants, far exceeding the value of any net energy savings, is much reduced. However, we still consider the likely impact on competition to be negative.</p> <p>The impact on BSC objective (d) would be negative, as for the original proposal.</p> <p>Given these considerations, our view is that the Alternative Modification would meet BSC objectives better than the Proposed Modification, though neither are better than the current baseline.</p>

Respondent	Response	Rationale
Statoil ASA	--	

Question 4: Do you agree with the Panel's suggested Implementation Dates for P229 Proposed and P229 Alternative?

**Summary**

Yes	No	Neutral/Other
7	1	1

**Responses**

Respondent	Response	Rationale
SAIC Ltd. (for and on behalf of ScottishPower)	Yes	Implementation must be planned to take account of all required system and process changes. These are the minimum timescales require to ensure as risk free an implementation as possible. While ScottishPower believe implementation should be in April in line with contract rounds and Party business planning, we accept that October 2011 is the earliest date possible for implementation.
E.ON UK	Yes	P229 should be implemented as soon as possible without any phasing which would complicate matters; tying implementation to sales contract rounds from 01 Apr or 01 Oct would be simplest for Parties to incorporate.

Respondent	Response	Rationale
RWE Supply & Trading GmbH	Yes	We believe that the implementation dates are reasonable.
Drax Power Limited	Yes	If approved, the implementation dates appear sensible.
Centrica	Yes	-
Scottish and Southern Energy	No	<p>As we noted in our Assessment Consultation response we do not support a within year change in the settlement arrangements, with the associated negative impact on consumers, that would arise if either P229 Original or Alternative were to be implemented in October.</p> <p>Therefore we do not support the first proposed implementation date of 1<sup>st</sup> October 2011 (if an Authority decision is received by 30<sup>th</sup> September 2010).</p> <p>For the sake of brevity we do not repeat the detailed arguments in our Assessment Consultation response here, rather the reader should refer to them as they form part of the P229 documentation.</p>
EDF Energy		<p>An Ofgem decision one month in advance of the key dates suggested in the assessment report would allow appropriate adjustments to be made to contracts of 1 year or more duration which are being finalised and extend into the potential losses regime, and/or avoid administrative inefficiency of revising such contracts. Notice 3 months in advance of the proposed key dates would allow more leeway to revise the process for such contracts efficiently.</p>
Statoil ASA	Yes	A twelve months implementation timescale (i.e. implementation date one year after decision) would be acceptable only in the case there were a gradual introduction of the scheme; otherwise, at least 2 years should be recommended.

Question 5: Do you agree that the legal text for P229 Proposed and P229 Alternative delivers the intent of the Proposed and Alternative?

**Summary**

Yes	No	Neutral/Other
5 (1)	-	3

**Responses**

Respondent	Response	Rationale
SAIC Ltd. (for and on behalf of ScottishPower)	Yes	-
E.ON UK	Yes	It appears appropriate.
RWE Supply & Trading GmbH	Yes	We agree that the legal text delivers the intent of the Proposed and Alternative dates are reasonable
Drax Power Limited	Yes	The legal text appears sensible.
Centrica	-	-
Scottish and Southern Energy	Yes	It appears to

Respondent	Response	Rationale
EDF Energy	Yes subject to minor corrections /clarifications described below.	<p>We think it would improve readability if defined terms in the legal text were distinguished wherever used. The usual convention in the BSC is capitalisation of such terms, but boldening as in the Grid Code and CUSC or use of italics could be applied. For example, "network mapping statement", "reference network mapping statement" and "prevailing network mapping statement" have particular meaning when used in Annex T-2 8.6 (proposed)/8.8 (alternative).</p> <p>The legal text should provide indication of the snapshot date of applicability of the Transmission and Distribution network data. For example, should it be historic to match the historic flow data; or forward looking to match the network during the year of applicability of TLF's to be calculated; at the discretion of the BSC Panel, or something else?</p> <p>In the legal text for the alternative, punctuation "," is missing compared with Proposal text, at Annex T-2 6.2 after "operates"; at 7.3 after "Year"; at 8.3 after "Period"; at 8.4 after "Year"; at Annex V-1 Table 9 Distribution Network Data after "specified in" and in Transmission Network Data after "specified in".</p> <p>Alternative text Annex T-2 at 8.8(d) simply refers to the revision of the network mapping statement, while equivalent Proposal text at 8.6(d) refers specifically, and probably incorrectly, to the reference network mapping statement.</p> <p>Alternative text Annex V-1 Table 9 should include annual reporting to any party (on request) of zonal delivery and offtake data provided by BSCCo to the TLFA under Annex T-2 section 8.2(d)(ii). This could be achieved by adding a specific item, or by modifying reporting of Metered Volume to include data provided by BSCCo to TLFA as well as data provided to BSCCo by CDCA.</p>
Statoil ASA	--	--



## Question 6: Do you have any further comments on P229?

### Responses

Respondent	Rationale
SAIC Ltd. (for and on behalf of ScottishPower)	<p>ScottishPower believe that P229 will have a detrimental impact on the applicable BSC Objectives, as detailed in our answer to question 1. It will increase the perceived regulatory risk associated with the electricity supply industry, increasing the costs of both its players and its customers to the overall detriment of economic efficiency. Risks remain for both existing players and new entrants of future changes in TLFs/TLMs. Irrespective of who should manage the risks, any additional risk would increase costs and affect future investment decisions. Such costs would not be insignificant considering the amount of investment capitals (£ billions) required for the expected renewable projects.</p> <p>There are potential impacts on consumers - Parties receiving windfall gains may not pass any savings onto customers. Parties who are windfall losers will have to pass price increases onto customers to cover costs. Increase in wholesale prices would ultimately increase costs to the end consumers.</p> <p>Implementation of P229 will lead to increased costs for several classes of Parties some of whom such as Wind farms, Nuclear stations and CHP plants are unable to respond and change their operational regime readily, and are located historically in the North of the country.</p> <p>ScottishPower are also concerned at the potential conflict between P229 and DECC's ongoing consultation on Improving Grid Access. Introduction of Zonal Losses would discourage the deployment of renewable generation in areas of optimal resource running contrary to the aims of the DECC process to encourage early investment in generation to meet Government targets on renewables and security of supply.</p>
E.ON UK	-
RWE Supply & Trading GmbH	-
Drax Power Limited	-

Respondent	Rationale
Centrica	-
Scottish and Southern Energy	<p>We set out in response to Q6 in the Assessment Consultation comments that we had on the analysis undertaken on behalf of the Modification Group with respect, in particular, to:-</p> <ul style="list-style-type: none"> <li>i) Round 3 Offshore wind;</li> <li>ii) Disproportionate impact with treatment of 132kV; and</li> <li>iii) Security of supply.</li> </ul> <p>For the sake of brevity we do not repeat these Assessment Consultation response comments here, rather the reader should refer to them as they form part of the P229 documentation.</p> <p>However, we would ask that the Panel give consideration to examining how the CBA process was undertaken for P229 and in particular any learning points that could be gleaned to improve the efficiency of the process going forward.</p> <p>For example, we found it somewhat strange that there appeared to be a reluctance to undertake sensitivity analysis, such as over a substantial increase in the level of WACC, that the Modification Group desired.</p>
EDF Energy	<p>We repeat here comments made in our Assessment Consultation, and have provided comments and suggestions on the draft Modification Report separately.</p> <p><b><u>Comments from Assessment Consultation Response</u></b></p> <p>It seems surprising that the large loadflow differences between peak and offpeak periods and/or working day and non-working days do not merit separate consideration in the same way as seasons. We would have expected consideration of these factors in the assessment process, although such a refinement would be unlikely to change our overall view.</p> <p>Losses arise on real networks from circulating currents due to reactive power effects not modelled by DC loadflow models. Previous studies have shown these can make significant contributions to variable losses and can affect transmission loss factors, but they are particularly sensitive to the prevailing configuration of the network and reactive power control in effect. Although it is arguable whether users should be allocated locational losses costs dependent on the System Operator's prevailing network operation, we would have expected more consideration of the potential</p>

Respondent	Rationale
	<p>materiality in the assessment, although it is unlikely any resulting refinement would change our overall view.</p> <p>The “aggressive wind” scenario with 6.9 GW of offshore wind by 2021 compared with 5.8 GW in the reference case does not seem particularly aggressive compared with latest government aspirations, and the aggressive renewables scenario in work conducted by the Electricity Networks Strategy Group (ENSG).</p> <p>The Cost Benefit modelling has not considered potential HVDC links within the GB transmission system which could considerably change the pattern of flows and resulting losses (independently of any locational losses scheme).</p> <p>The modelling has been conducted in relative isolation from the many other industry proposals currently on the table. It has not considered the impact of other potential changes affecting the despatch decisions of generators in particular, including potential constraint management methods, possible locational BSUoS, and changes to transmission access and charging. Specifically nuclear life extensions have not been considered. All of which could have far reaching implications for any locational pricing mechanism.</p> <p>We note the analysis of impacts on CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub>. The price attributed to theoretically avoided SO<sub>x</sub> and NO<sub>x</sub> emissions far exceeds that which we believe appropriate for GB large power station emissions, and their materiality therefore seems hugely exaggerated. We note that the SO<sub>x</sub>/NO<sub>x</sub> environmental benefits apparently arise because more polluting generators appear coincidentally to be currently concentrated in locations with disadvantageous transmission loss factors. This suggests a one off short term benefit rather than a long term sustainable environmental benefit. We note the SO<sub>x</sub>/NO<sub>x</sub> disbenefits in the high gas price scenario.</p> <p>P229 would create gross cash/energy flows from some locations and from some parties to others. These seek to imitate the flows which would be expected to occur in an idealised market situation where a party should be willing to pay another party for any benefit created by the action of the other party. However, in reality there is no market for, and no rights to, losses allocations, and imposing such a scheme represents a regulatory charging regime with largely unmanageable risk.</p> <p>We estimate the impact of the Proposed Modification P229 on EDF Energy supply business would be an increase in energy purchase costs of approximately £10m per year. This cost would unavoidably have to be passed on to our customers.</p> <p>We note a significant difference in forecast results for the Alternative Proposal between London Economics/Ventyx Cost</p>

Respondent	Rationale
	<p>Benefit Analysis for P229 and analysis undertaken in 2006 by Oxera for proposals P198/203 (similar to the current proposal) and P204 (similar to the current alternative proposal). Oxera results indicated that the value transfer between different zones under P204 were approximately 20% of those under P203, proportional to the scaling factor used in the alternative relative to the proposal, as would be expected. However, the theoretical potential energy cost savings under P204 were about 50% of those under P203. This would be consistent with the range of different potential marginal generator costs being quite small so that small losses adjusters had a similar effect on theoretical despatch changes as much larger adjusters. In the LE/Ventyx analysis for P229, the theoretical energy cost savings for the alternative show a similar proportion as the transfer between zones, approximately 20% of those under the original proposal. This suggests the assumed individual generator costs were more widely and/or smoothly distributed so that the impact of loss adjusters is directly proportional to their size. We asked Elexon for information to confirm this explanation, but none was readily available, so we draw no conclusion on which might be more accurate, but note the significant difference.</p> <p>The proposed approach for potential HVDC circuits within the GB transmission system under a locational losses scheme is a pragmatic one. However, if a locational losses scheme were to be approved and implemented, the suggestion to exclude losses on these circuits does not seem consistent with the principle of allocating losses to those considered responsible for creating or (in the case of Proposed Modification P229) avoiding them. The fact that the flow on a parallel DC circuit may be independent of small changes in flow of users on either side of it does not mean those users are not affecting the losses on the circuit, and exclusion of losses on such a circuit because a different method of determining an allocation is required seems a practical solution rather than a principled one. If a locational losses scheme were to be approved and implemented, we would expect further BSC Modifications to be raised in respect of losses on any firmly anticipated HVDC circuits.</p>
Statoil ASA	<p>It is important that introduction of regulation imposing costs on industry is done with an appropriate phase-in period. Any change in the charging methodology should therefore include a predictable, linear introductory phase. This is not the case of P229.</p>